

AMENDMENTS TO THE CLAIMS

Listing of Claims

The following listing of claims replaces all previous listings or versions thereof:

- 1-17. (Canceled)
18. (Currently amended) An isolated and purified polypeptide comprising the sequence of SEQ ID NO:3 (~~Vac14 Human-AA~~).
19. (Currently amended) The isolated and purified polypeptide of claim 18, wherein said polypeptide is a fusion protein further comprising additional non-[[human]]Vac14 sequences.
- 20-23. (Canceled)
24. (Currently amended) An oligopeptide of between ~~about 5~~10 and about 30 residues, said oligopeptide comprising at least ~~about 5~~10 consecutive residues of ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 or SEQ ID NO:7~~.
25. (Currently amended) The oligopeptide of claim 24, wherein said ~~oligopeptide~~oligopeptide is ~~5~~10, 15, 20, 25, or 30 residues in length.
26. (Currently amended) The oligopeptide of claim 24, wherein the number of consecutive residues is ~~5~~, 10, 15, 20, 25, or 30.
- 27-32. (Canceled)
33. (Withdrawn) A method of identifying a subject at risk of developing diabetes comprising assessing the structure, function or expression of Fab1, Vac14 and/or Fig4 in cells of said subject.
34. (Withdrawn) The method of claim 33, wherein assessing comprises assessing expression.

35. (Withdrawn) The method of claim 34, wherein assessing expression comprises Northern blotting.
36. (Withdrawn) The method of claim 34, wherein assessing expression comprises quantitative RT-PCR.
37. (Withdrawn) The method of claim 34, wherein assessing expression comprises Western blotting.
38. (Withdrawn) The method of claim 34, wherein assessing expression comprises quantitative immunohistochemistry.
39. (Withdrawn) The method of claim 33, wherein assessing comprises assessing activity.
40. (Withdrawn) The method of claim 39, wherein assessing activity comprises measuring PI(3,5)P₂.
41. (Withdrawn) The method of claim 40, wherein assessing activity comprises measuring PI(3,5)P₂ turnover.
42. (Withdrawn) The method of claim 40, wherein assessing activity comprises measuring PI(3,5)P₂ steady state levels.
43. (Withdrawn) The method of claim 40, wherein assessing activity comprises measuring PI(3,5)P₂ synthesis.
44. (Withdrawn) The method of claim 40, wherein assessing activity comprises measuring PI(3)P.
45. (Withdrawn) The method of claim 39, wherein assessing activity comprises measuring protein kinase activity.
46. (Withdrawn) The method of claim 33, wherein assessing comprises assessing structure.
47. (Withdrawn) The method of claim 46, wherein assessing structure comprises nucleic acid sequencing.

48. (Withdrawn) The method of claim 47, wherein sequence comprises PCR.
49. (Withdrawn) The method of claim 47, wherein sequence comprises RT-PCR.
50. (Withdrawn) The method of claim 469, wherein assessing structure comprises measuring antibody binding.
51. (Withdrawn) The method of claim 50, wherein measuring antibody binding comprises, RIA, ELISA, Western blot or immunohistochemistry.
52. (Withdrawn) The method of claim 46, wherein assessing structure comprises high stringency nucleic acid hybridization.
53. (Withdrawn) The method of claim 33, further comprising obtaining a cell from said subject.
54. (Withdrawn) The method of claim 53, wherein said cell is a kidney cell, a liver cell, a leukocyte, an adipocyte, or a muscle cell.
55. (Withdrawn) The method of claim 53, further comprising subjecting said cell to stress prior to assessing expression or activity.
56. (Withdrawn) The method of claim 55, wherein stress is osmotic stress.
57. (Withdrawn) The method of claim 55, further comprising subjecting said cell to hormonal stimulation prior to assessing expression or activity.
58. (Withdrawn) The method of claim 57, wherein said hormonal stimulation is insulin stimulation.
59. (Withdrawn) A method of screening a candidate compound for their ability to increase glucose uptake comprising:
 - (a) providing a insulin-responsive cell;
 - (b) contacting said insulin-responsive cells with said candidate compound; and

- (c) measuring the change in $\text{PI}(3,5)\text{P}_2$ in said cell.
60. (Withdrawn) The method of claim 49, wherein said insulin-responsive cell is an adipocyte or a muscle cell.